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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/541,452	03/31/2000	Mark D Amundson	279.152US1	3682

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Schwegman Lundberg Woessner & Kluth P A
P O Box 2938
Minneapolis, MN 55402

EXAMINER	
OROPEZA, FRANCES P	

ART UNIT	PAPER NUMBER
3762	9

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/541,452	Applicant(s) AMUNDSON ET AL.
	Examiner Frances P. Oropeza	Art Unit 3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 23-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 23-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 March 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. The Applicant amended independent claims 1 and 15 to include a magnetically permeable core surrounded by a substantially planar telemetry coil. Claims 23-29 are newly submitted. Claims 28 and 29 are subject to a restriction. The amended claims and newly submitted claims, claims 23-27, are examined below.

Restriction/Election

2. Newly submitted claims 28 and 29 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Independent claim 28 includes a second telemetry coil and independent claims 1 and 15 do not contain a second telemetry coil.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 28 and 29 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

3. Claim 6 and 23-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for filing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In claim 6 and claim 23, "ferrite (iron-oxide) powder" is indefinite. Correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al. (US 5741315). The magnetic element is made of ferrite (ferrite is known to be a powered magnetic material consisting chiefly of ferric oxide) (c 2, ll 48-55). The communication lead is read to be the inductive coupling extending between coil (12) at a first end of the lead and the implant (26) at the second end of the lead.

Claim Rejections - 35 USC § 103

5. Claims 1, 3-6 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batina (US 4700707) in view of Silvian (US 6301504).

Batina et al. disclose a telemetry system with a substantially planar telemetry coil that is communicatively coupled to an implanted pacer (113) (figure 9 and c 6, ll 20-37). Batina et al. discloses the claimed invention except for a magnetically permeable core surrounded by the telemetry coil.

Silvian discloses a high speed telemetry system with a transmit coil (22) and a receive coil (30) and teaches the use of a ferrite core (ferrite is known to be a powered magnetic material consisting chiefly of ferric oxide) to support high transmission rates (c 6, ll 55-58 and c 9, ll 39-42). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the telemetry system as taught by Batina et al., with the ferrite

core as taught by Silvian to provide a coil configuration that will enable high transmission rates so data can be transferred without significant error while preserving the limited power resources of the implanted device (c 1, ll 50-55).

6. Claims 2, 8-11, 14, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batina et al. (US 4700707) and Silvian (US 6301504) in view of Zarinetchi et al (US 6389318). As discussed in paragraph 5 of this action, modified Batina et al. disclose the claimed invention except for providing a flexible, insulated housing for the external telemetry coil that will conform to an irregular surface to enable the device to mate with the patient's body.

Zarinetchi et al. disclose a transcutaneous energy transfer device and teach that it is known to provide a flexible insulated housing for the primary coil that will conform to an irregular surface (c 4, ll 59-65; c 6, l 56 – c 7, l 29; figures 7A & 7B). The padded cushions (712 and 750) are read to be disposed over the housing. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the modified telemetry system as taught by Batina et al., with the insulated housing for the external telemetry coil that conforms to an irregular surface as taught by Zarinetchi et al. to enable the device to mate with the patient's body so a comfortable and effective interface with the patient is provided (c 6, ll 57-61).

7. Claims 7, 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batina (US 4700707) and Silvian (US 6301504).

Batina et al. disclose a telemetry system with a substantially planar first telemetry coil that is communicatively coupled to an implanted pacer (113) (figure 9 and c 6, ll 20-37). The first telemetry coil is sized such that wireless communications with the implantable device are

enabled, read that, in appropriate applications, the first telemetry coil diameter is in the range of fifteen to forty-six centimeters. Batina et al. discloses the claimed invention except for a magnetically permeable core surrounded by the telemetry coil.

Silvian discloses a high speed telemetry system with a transmit coil (22) and a receive coil (30) and teaches the use of a ferrite core (ferrite is known to be a powered magnetic material consisting chiefly of ferric oxide) to support high transmission rates (c 6, ll 55-58 and c 9, ll 39-42). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the telemetry system as taught by Batina et al., with the ferrite core as taught by Silvian to provide a coil configuration that will enable high transmission rates so data can be transferred without significant error while preserving the limited power resources of the implanted device (c 1, ll 50-55).

In the alternative, it is known in the telemetry art to provide a coil sized to enable wireless communications. It would have been an obvious matter of design choice to one skilled in the art to provide a first telemetry coil having a diameter in the range of fifteen to forty-six centimeters since the Applicant has not disclosed that the fifteen to forty-six centimeter diameter provides any criticality and/or unexpected results. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the modified telemetry system as taught by Batina et al., with the first telemetry coil having a diameter of fifteen to forty-six centimeters to provide a communication linked sized appropriately to the application so the telemetry communications can be optimized for a high quality transmission in a minimum amount of time.

8. Claims 12, 13 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batina et al. (US 4700707) and Silvian (US 6301504) in view of Lee et al. (US 5741315). As discussed in paragraph 5 of this action, modified Batina et al. discloses the claimed invention except for providing a second telemetry coil concentrically placed in a common plane with the housing and communicatively coupled to the first end of the communication lead.

Lee et al. disclose an apparatus for receiving telemetry signals from active implant medical device and teach that it is known to use a second telemetry coil concentrically placed in a common plane with the housing and communicatively coupled to the first end of the communication lead to enable an increase in the signal to noise ratio (coils (12 and 22); figures 1 & 3; and c 1, ll 31-36). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the modified telemetry system as taught by Batina et al., with the second telemetry coil concentrically placed in a common plane with the housing and communicatively coupled to the first end of the communication lead as taught by Lee et al. to increase the signal to noise ratio so that the speed of data transmission between the implant and programmer can be significantly increased (c 1, ll 31-36 and c 1, l 61 – c 2, l 3).

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. US 5949155 to Tamura et al. teaches that it is known to use a core to alter the inductance (figure 3b).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fran Oropeza whose telephone number is (703) 605-4355. The examiner can normally be reached on Monday – Thursday from 6 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D. Sykes can be reached on (703) 308-5181. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 306-4520 for regular communication and (703) 306-4520 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

Frances P. Oropeza
Patent Examiner
Art Unit 3762

FPO
6/19/02

GEORGE R. EVANISKO
PRIMARY EXAMINER
6/21/2